

IN THE CLAIMS

1. (Currently Amended) A device comprising:

jitter buffer means for receiving from a network packets that encode data which represent sound; and

decoding means for decoding the packets, the decoding means including a processor adapted to:

determine an intended sequence of the voice sound data from the received packets;

arrange the received packets in the sequence;

infer lost packets in places of the sequence not having a corresponding received packet;

measure durations for multiple different variable duration packet loss episodes; and

determine a burstiness statistic for quantifying non-uniform lost packet distribution with respect to the received packets within the sequence according to the measured durations for the multiple different variable duration packet loss episodes wherein the burstiness statistic is derived independently of a packet loss rate.

2. (Currently Amended) The device of claim 1, wherein the processor is further adapted to-determine the burstiness statistic according to an identified longest one of the measured variable duration packet loss episodes.

3. (Previously Presented) The device of claim 2, wherein the processor is further adapted to-determine the burstiness statistic according to an average duration for the measured variable duration packet loss episodes.

4. (Previously presented) The device of claim 1, wherein the processor is further adapted to determine the burstiness statistic by determining a duration number that identifies a non-uniform number of contiguously occurring lost packets or contiguously occurring received packets in the sequence of packets.

5. (Original) The device of claim 4, wherein the processor is further adapted to:
determine a figure of merit for the sequence from the burstiness statistic.

6. (Original) The device of claim 5, wherein the processor is further adapted to:
determine an average packet loss rate,
wherein the figure of merit is determined also from the average packet loss rate.
7. (Canceled)
8. (Previously presented) The device of claim 4, wherein the processor generates multiple duration numbers identifying multiple different non-uniform durations of contiguously non-received packets in the sequence of packets and determines the burstiness statistic according to the multiple duration numbers.
9. (Previously presented) The device of claim 5, wherein the processor generates the burstiness statistic according to a variance in the plurality of duration numbers.
10. (Original) The device of claim 1, wherein the processor is further adapted to determine the burstiness statistic by:
defining good states in the sequence that correspond to at least some of the received packets;
defining bad states in the sequence that correspond to at least some of the lost packets;
and
counting a number of transitions in the sequence between the good states and the bad states.
11. (Original) The device of claim 10, wherein the processor is further adapted to:
determine a figure of merit for the sequence from the burstiness statistic.
12. (Original) The device of claim 11, wherein the processor is further adapted to:
determine an average packet loss rate,
wherein the figure of merit is determined also from the average packet loss rate.
13. (Original) The device of claim 10, wherein the processor is further adapted to:
compute a normalized burstiness statistic from the burstiness statistic.

14. (Original) The device of claim 13, wherein the processor is further adapted to:
determine a figure of merit for the sequence from the normalized burstiness statistic.
15. (Original) The device of claim 14, wherein the processor is further adapted to:
determine an average packet loss rate,
wherein the figure of merit is determined also from the average packet loss rate.
16. (Original) The device of claim 10, wherein the processor is further adapted to determine the burstiness statistic by:
count a number of packets; and
divide the counted number of transitions by the counted number of packets.
17. (Original) The device of claim 16, wherein
the counted transitions are from the bad states to the good states, and
the counted packets are the lost packets.
18. (Currently Amended) A device comprising:
a network interface for coupling to a network; and
a processor coupled with the network interface, wherein the processor is adapted to
receive packets containing sound data from a network;
determine an intended sequence of the sound data from the received packets;
arrange the received packets in the sequence;
infer lost packets in places of the sequence not having a corresponding received packet;
identifying durations for multiple different contiguous variable duration packet loss episodes;
calculating an average duration for the identified durations of the different contiguous variable duration packet loss episodes; and
determine a burstiness statistic independently of a packet loss rate for quantifying non-uniform lost packet distribution with respect to the received packets within the sequence according to the calculated average duration for the different contiguous variable duration packet loss episodes.

19. (Canceled)

20. (Currently Amended) The device of claim ~~19~~ 18, wherein the processor is further adapted to compute the average duration by taking a ratio between a number of the variable duration packet loss episodes and a number of lost packets.

21. (Previously presented) The device of claim 18, wherein the processor is further adapted to determine the burstiness statistic according to a duration number that identifies a non-uniform number of contiguously occurring lost packets or contiguously occurring received packets in the sequence of packets.

22. (Original) The device of claim 21, wherein the processor is further adapted to:
determine a figure of merit for the sequence from the burstiness statistic.

23. (Original) The device of claim 22, wherein the processor is further adapted to:
determine an average packet loss rate,
wherein the figure of merit is determined also from the average packet loss rate.

24. (Currently Amended) The device of claim 21, wherein the burstiness statistic is ~~derived independently of a packet loss rate~~ a maximum of a plurality of duration numbers.

25. (Original) The device of claim 21, wherein the burstiness statistic is an average of a plurality of duration numbers.

26. (Original) The device of claim 21, wherein the burstiness statistic is a variance of a plurality of duration numbers.

27. (Original) The device of claim 18, wherein the processor is further adapted to determine the burstiness statistic by:
defining good states in the sequence that correspond to at least some of the received packets;
defining bad states in the sequence that correspond to at least some of the lost packets;
and

counting a number of transitions in the sequence between the good states and the bad states.

28. (Original) The device of claim 27, wherein the processor is further adapted to:
determine a figure of merit for the sequence from the burstiness statistic.

29. (Original) The device of claim 28, wherein the processor is further adapted to:
determine an average packet loss rate,
wherein the figure of merit is determined also from the average packet loss rate.

30. (Original) The device of claim 27, wherein the processor is further adapted to:
compute a normalized burstiness statistic from the burstiness statistic.

31. (Original) The device of claim 30, wherein the processor is further adapted to:
determine a figure of merit for the sequence from the normalized burstiness statistic.

32. (Original) The device of claim 31, wherein the processor is further adapted to:
determine an average packet loss rate,
wherein the figure of merit is determined also from the average packet loss rate.

33. (Original) The device of claim 27, wherein the processor is further adapted to determine the burstiness statistic by:
count a number of packets; and
divide the counted number of transitions by the counted number of packets.

34. (Original) The device of claim 33, wherein
the counted transitions are from the bad states to the good states, and
the counted packets are the lost packets.

35. (Currently Amended) An article comprising: a storage medium, said storage medium having stored thereon instructions, that, when executed by at least one device, result in:
receiving packets containing sound data from a network;
determining an intended sequence of the sound data from the received packets;
arranging the received packets in the sequence;

inferring lost packets in locations of the sequence not having a corresponding received packet;

identifying durations for multiple different contiguous variable duration packet loss episodes;

calculating an average duration for the identified durations of the different contiguous variable duration packet loss episodes; and

determining a burstiness statistic for quantifying how the lost packets are distributed with respect to the received packets within the sequence according to the calculated average duration for the different contiguous variable duration packet loss episodes and deriving the burstiness statistic independently of a packet loss rate.

36. (Canceled)

37. (Currently Amended) The article of claim 36 35 , wherein the instructions further result in computing the average duration by taking a ratio between a number of the variable duration packet loss episodes and a number of lost packets.

38. (Previously presented) The article of claim 35, wherein the instructions result in determining the burstiness statistic by:

determining at least one duration number in the sequence, wherein
the duration number is determined by counting either the number of contiguously occurring lost packets or contiguously occurring received packets.

39. (Original) The article of claim 38, wherein the instructions further result in:
determining a figure of merit for the sequence from the burstiness statistic.

40. (Original) The article of claim 39, wherein the instructions further result in:
determining an average packet loss rate,
wherein the figure of merit is determined also from the average packet loss rate.

41. (Original) The article of claim 38, wherein the burstiness statistic is a maximum of a plurality of duration numbers.

42. (Original) The article of claim 38, wherein the burstiness statistic is an average of a plurality of duration numbers.

43. (Original) The article of claim 38, wherein the burstiness statistic is a variance of a plurality of duration numbers.

44. (Original) The article of claim 35, wherein the instructions result in determining the burstiness statistic by:

defining good states in the sequence that correspond to at least some of the received packets;

defining bad states in the sequence that correspond to at least some of the lost packets;
and

counting a number of transitions in the sequence between the good states and the bad states.

45. (Original) The article of claim 44, wherein the instructions further result in:
determining a figure of merit for the sequence from the burstiness statistic.

46. (Original) The article of claim 45, wherein the instructions further result in:
determining an average packet loss rate,
wherein the figure of merit is determined also from the average packet loss rate.

47. (Original) The article of claim 44, wherein the instructions further result in:
computing a normalized burstiness statistic from the burstiness statistic.

48. (Original) The article of claim 47, wherein the instructions further result in:
determining a figure of merit for the sequence from the normalized burstiness statistic.

49. (Original) The article of claim 48, wherein the instructions further result in:
determining an average packet loss rate,
wherein the figure of merit is determined also from the average packet loss rate.

50. (Original) The article of claim 44, wherein the instructions further result in determining the burstiness statistic by:

counting a number of packets; and

dividing the counted number of transitions by the counted number of packets.

51. (Original) The article of claim 50, wherein

the counted transitions are from the bad states to the good states, and

the counted packets are the lost packets.

52. (Previously presented) A method comprising:

receiving packets containing sound data from a network;

determining an intended sequence of the voice sound data from the received packets;

arranging the received packets in the sequence;

inferring lost packets in places of the sequence not having a corresponding received packet;

measuring durations for multiple different contiguous variable duration packet loss episodes; and

determining a burstiness statistic for quantifying how the lost packets are non-uniformly distributed with respect to the received packets within the sequence according to the measured durations for the multiple different variable duration packet loss episodes that is derived independently of a packet loss rate for the received packets.

53. (Original) The method of claim 52, further comprising:

determining a figure of merit for the sequence from the burstiness statistic.

54. (Currently Amended) The method of claim 52 according to claim 52 including:

calculating an average duration for the measured durations of the different contiguous variable duration packet loss episodes; and

determining the burstiness statistic according to the calculated average duration for the different contiguous variable duration packet loss episodes.

55. (Previously presented) The method of claim 52, wherein the burstiness statistic is determined by:

determining at least one duration number in the sequence, wherein

the duration number is determined by counting either the number of contiguously occurring lost packets or contiguously occurring received packets.

56. (Original) The method of claim 55, further comprising:

determining a figure of merit for the sequence from the burstiness statistic.

57. (Original) The method of claim 56, further comprising:

determining an average packet loss rate,

wherein the figure of merit is determined also from the average packet loss rate.

58. (Original) The method of claim 55, wherein the burstiness statistic is a maximum of a plurality of duration numbers.

59. (Original) The method of claim 55, wherein the burstiness statistic is an average of a plurality of duration numbers.

60. (Original) The method of claim 55, wherein the burstiness statistic is a variance of a plurality of duration numbers.

61. (Original) The method of claim 52, wherein the burstiness statistic is determined by:

defining good states in the sequence that correspond to at least some of the received packets;

defining bad states in the sequence that correspond to at least some of the lost packets;

and

counting a number of transitions in the sequence between the good states and the bad states.

62. (Original) The method of claim 61, further comprising:

determining a figure of merit for the sequence from the burstiness statistic.

63. (Original) The method of claim 62, further comprising:

determining an average packet loss rate,

wherein the figure of merit is determined also from the average packet loss rate.

64. (Original) The method of claim 61, further comprising:
 computing a normalized burstiness statistic from the burstiness statistic.
65. (Original) The method of claim 64, further comprising:
 determining a figure of merit for the sequence from the normalized burstiness statistic.
66. (Original) The method of claim 65, further comprising:
 determining an average packet loss rate,
 wherein the figure of merit is determined also from the average packet loss rate.
67. (Original) The method of claim 61, wherein the burstiness statistic is further determined by:
 counting a number of packets; and
 dividing the counted number of transitions by the counted number of packets.
68. (Original) The method of claim 67, wherein
 the counted transitions are from the bad states to the good states, and
 the counted packets are the lost packets.
69. (Currently Amended) A method comprising:
 receiving packets containing sound data from a network;
 determining an intended sequence of the sound data from the received packets, where the sequence is comprised of a plurality of locations;
 arranging each received packet into a corresponding location in the sequence;
 inferring lost packets in locations of the sequence not having a corresponding received packet; and
 determining a burstiness statistic from the locations of the lost and received packets in the sequence, where the burstiness statistic is determined independently of a packet loss rate and quantifies non-uniform lost packet distribution with respect to the received packets within the sequence.
70. (Previously presented) The method of claim 69, further comprising:
 determining a figure of merit for the sequence from the burstiness statistic.

71. (Previously presented) The method of claim 70, further comprising:

determining an average packet loss rate,

wherein the figure of merit is determined also from the average packet loss rate.